

Breast Cancer Somatic Genetics Study (BASIS)

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Research Areas



Biomarker Research

Diagnostic, Genomic Biomarker



Basic Research

At a Glance

- Status: **Completed Consortium**
- Year Launched: **2010**
- Initiating Organization: **European Commission Seventh Framework Programme (FP7)**
- Initiator Type: **Government**
- Location: **Europe**

Abstract

The Breast Cancer Somatic Genetics Study (BASIS) aims to generate complete catalogs of somatic mutations in 500 breast cancers, of the ER+ve, HER2- subclass, under the International Cancer Genome Consortium model by high-coverage, shotgun genome sequencing of both tumor and normal DNA.

Mission

The BASIS strategy is to collect, store, review, quality control, and extract deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) from breast cancer and normal tissues from 500 ER+, HER2- breast cancer cases, which will be subjected to a coordinated series of genomic analyses including whole-genome shotgun sequencing, genome-wide copy number analysis, messenger RNA (mRNA) expression analysis, micro RNA (miRNA) expression analysis, and genome-wide methylation analysis. A comprehensive catalog of somatic mutations will be generated from each cancer. Somatic mutation catalogs from the 500 cancers will be analyzed and integrated with expression and methylation data to identify novel cancer genes, characterize subverted biological pathways that are operative, describe

patterns of somatic mutation, and explore early translational applications of personalized somatic genomic data for patients with ER+, HER2- breast cancer.

Consortium History

The BASIS project was launched in July 2010.

Structure & Governance

The project includes nine work packages.

Financing

The BASIS project is a European research project funded by the European Community's Seventh Framework Programme (FP7/2010-2014) under the grant agreement number 242006.

Impact/Accomplishment

The results of this exhaustive and comprehensive set of studies will have enormous impact on the understanding of the causes and biology of breast cancer and will lead to major advances in detection, prevention, and treatment of one of the most common diseases and causes of death in the developed world.

Links/Social Media Feed

Homepage

<http://www.basisproject.eu/>

Points of Contact

Coordinating Support Office

Ms. Sancha Martin
Wellcome Trust Sanger Institute
Wellcome Trust Genome Campus
Hinxton, Cambridge, CB10 1SA
phone: +44 1223 494981
fax: +44 1223 494919

Sponsors & Partners

Academic Medical Center in Amsterdam
Cancer Research UK Cambridge Research Institute (CRI)
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Jules Bordet Institute
Lund University
Oslo University Hospital
Radboud University, Nijmegen, The Netherlands
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The Netherlands Cancer Institute (NKI)
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Updated: **04/07/2016**